

Extremely Rapid H7N9 Vaccine Design

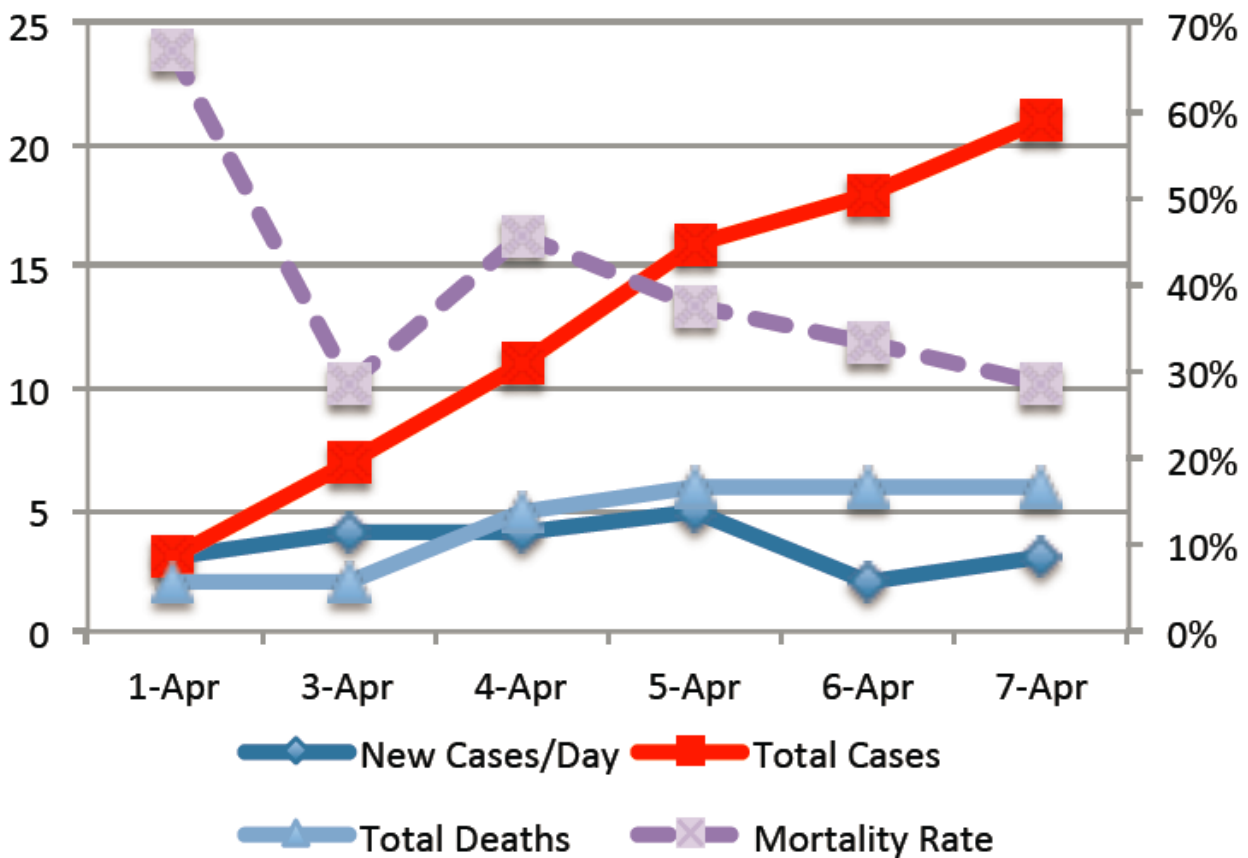
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CEO/CSO
www.epvax.com



WHO Report Graph



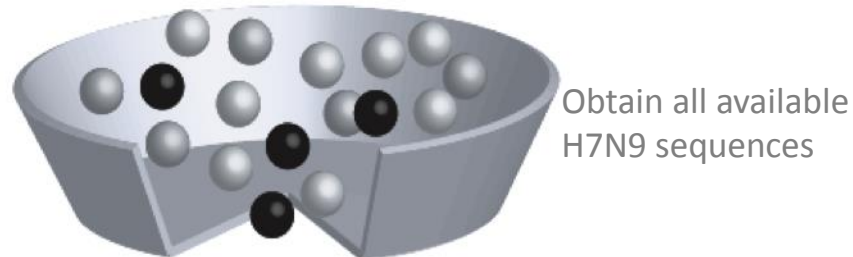
H6N9 Cases and Deaths - WHO Report



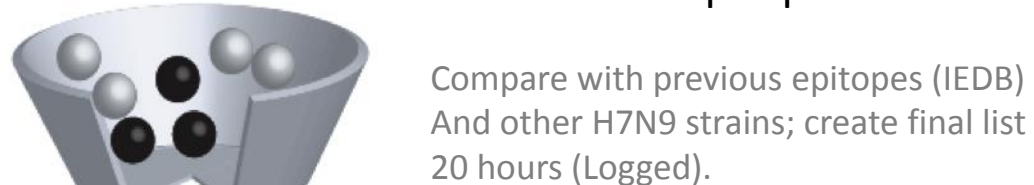
Extremely Rapid H7N9 Vaccine Design



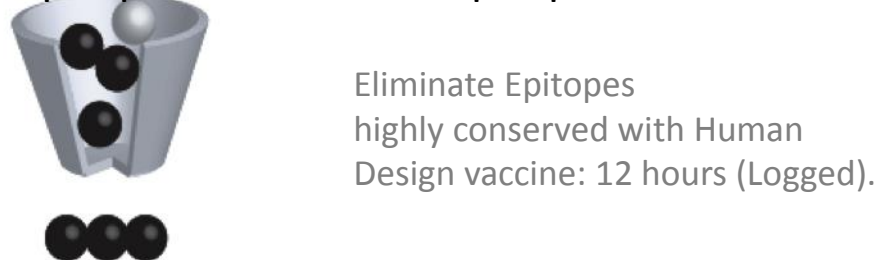
April 05, 2013: Obtain H7N9 Sequences (4 human-sourced; GISAID)



EpiMatrix Analysis: Identification of H7N9 Class I and Class II Epitopes



101 H7N9 ICS* Class II Epitopes + 586 Class I Epitopes



April 06, 2013: H7N9 Vaccine: Two Constructs, Class I and Class II



EpiMatrix Readouts

Class II (Thelper) epitope Mapping by EpiMatrix (www.EpiVax.com) Comparison of Emerging H7N9 with Current Circulating Influenza Strains (TIV)		
A/California/7/2009 (H1N1)	A/Victoria/361/2011 (H3N2)	B/Wisconsin/1/2010
Conserved T helper Epitopes:	Conserved T helper Epitopes:	Conserved T helper Epitopes:
78	3	14
of 101, or	of 101, or	of 101, or
77%	3%	14%
Are over 70% conserved	Are over 70% conserved	Are over 70% conserved
55	0	0
Of 101, or	101	101
54%	0%	0%
Are more than 90% conserved	Are more than 90% conserved	Are more than 90% conserved
Of a total of 101 epitopes	Of a total of 101 epitopes	Of a total of 101 epitopes
0	3	0
or	or	or
0%	3%	0%
Are conserved in HA and NA	Are conserved in HA and NA	Are conserved in HA and NA

EpiMatrix Readouts



H7N9 Class I (CTL) epitope Mapping by EpiMatrix (www.EpiVax.com)		
A Comparison of Emerging H7N9 with Current Circulating Influenza Strains (TIV)		
A/California/7/2009 (H1N1)	A/Victoria/361/2011 (H3N2)	B/Wisconsin/1/2010
Total Class I Epitopes Conserved	Total Class I Epitopes Conserved	Total Class I Epitopes Conserved
522	2	12
586	1103	76
89%	0%	16%
(Are 100% conserved)	(Are 100% conserved)	(Are 100% conserved)
of which	of which	
8	2	0
epitopes or a total of	epitopes or a total of	epitopes or a total of
1%	0%	0%
... are conserved in HA and NA	... are conserved in HA and NA	... are conserved in HA and NA

Science without fear.



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